

indenture young apprentices to mills where they were forced to work more than ten hours a day and, as in the other causes he espoused, added philosophical, religious, and medical arguments to his public expressions of contempt. His statistical inquiries enabled him to take a leading part in the public health movement in Manchester which led to the formation of one of Britain's first boards of health and the opening of a fever hospital.⁸⁰ In his study of Percival's contribution to the development of medical statistics, E.M. Brockbank points out that Percival was credited by later reformers with an important contribution to the factory movement. 'Alfred', the pseudonymous author of *The History of the Factory Movement*, wrote in this work that Percival's submissions to the Board of Health on the question of factory practices were in themselves a condensation of the evils of the factory system.⁸¹

Another, less successful project connected with Percival's statistics was initiated together with his friend, Dr Haygarth in Chester. According to their statistics, smallpox epidemics were still the leading cause of death in their communities and, it was then noted, particularly fatal to the poor who did not enjoy the protection of inoculation. Haygarth concluded, and Percival concurred, that the 'intelligent and opulent', whose families were protected by inoculation, had a duty to promote measures to preserve weak and defenceless labourers from a disease to which only they were exposed.⁸² With the financial support of a group of philanthropic Dissenters – including Drs Aikin, Fothergill, Currie, Dobson, Falconer and Lettsom – Percival and Haygarth mounted yet another elaborate campaign, to eliminate smallpox in Britain by means of mass inoculation. It has been suggested that the project eventually failed, not because it was too ambitious nor because of Edward Jenner's vaccine, which only appeared two years *after* their project collapsed, but rather because it was run and supported almost exclusively by prominent Dissenters in the troubled years of the French Revolution.⁸³ Despite the collapse of their own project, Percival and Haygarth helped to promote Jenner's vaccine as a means to eradicate what the latter described as 'the most mortal enemy that ever afflicted mankind'.⁸⁴

Thoughts on Hospitals

Percival's attempt to expand and improve hospital facilities in Manchester met with greater success. This project provided the immediate institutional context for his medical ethics and requires a brief overview. The Manchester Infirmary was part of an ambitious

charity movement which by the end of the century had created thirty-eight provincial institutions based on the same model and operating under similar rules.⁸⁵ The hospitals were privately funded and depended on the unpaid, voluntary services of physicians, surgeons and clergymen. These institutions were specifically designed to provide limited short term care for those of the labouring poor who were not covered by the existing poor-law relief for paupers. Because the primary goal of infirmary care was to assist patients to return as soon as possible to their labours, the great majority of the sick poor, those with chronic, incurable, contagious, including venereal, diseases were not originally considered the proper objects of this charity.

In his study of the Enlightenment hospital, Guenter Risse explains that the duty to assist the working poor was based on an unwritten contract established between the social classes. Since they were willing to work, labourers of all types were considered 'deserving of assistance'.⁸⁶ Percival's son, an Anglican clergyman, pronounced at his annual infirmary sermon that 'The wisdom of such charitable foundations can admit of no dispute'. He explained the nature of this 'contract' as follows:

On the lower classes of our fellow citizens alone we depend for food, for raiment, for the habitations in which we dwell; and for all the convenience and comforts of life. But health is essential for their capacity for labour, and in this labour, I fear, it is too often sacrificed.⁸⁷

Labouring for the rich extracts a great sacrifice on the part of the labourer and, consequently,

He who at once toils and suffers for our benefit, has a multiplied claim to our support; and to withhold it would be equally chargeable with folly, ingratitude and injustice.⁸⁸

Percival senior, in a discussion of poverty with his son, insisted that the claims of the working poor and the corresponding duties of the rich toward them are based on strict principles of justice. The poor labourer should not only be paid enough to feed and care for himself and his family; the rich also owe him 'compassion in sickness', 'relief in poverty and old age', and 'tender attention to his interests and happiness'. Justice included concern for the spiritual welfare of the worker which the rich were obliged to promote by allowing the former leisure enough 'to avail himself of the privileges of his rational and moral nature, and to work out, through divine assistance, his own salvation'. While a distinction of ranks was

necessary to a well-regulated society, it was important to remember that this distinction had its origins in talents, virtue, and knowledge. 'Wealth, power and greatness are but *effects*, the *causes* of which are to be sought for in the human mind.' Moreover,

in every orderly community where art is fostered, genius allowed full scope, and industry secure in its acquisitions, one unceasing movement upwards may be observed through the great scale of life.⁸⁹

According to Percival's view of progress, it was the duty of those higher in the 'scale of life' to promote the aspirations of those below them, provided that these aspirations were not unfavourable to both private happiness and national prosperity. Percival concluded that it was education alone that accomplished both these objectives and since 'capacity is confined to no station', it should be actively sought out and cultivated in the poor. He gave a lengthy argument for the right of the poor to be educated, and buttressed his arguments with statistics from the works of that century's most famous prison reformer, John Howard, designed to show the connection between low crime rates and the successful scheme of general education in Scotland.⁹⁰

If prudence and attention to duty directed the philanthropic spirit, it was, according to Percival and his group, initiated by the common human principle of benevolence, humanity, the moral sense, or innate sympathy. As John Aikin explained,

To counterbalance the various evils and miseries of life, Providence has planted in our natures a benevolent principle, which without waiting for duty to incite, or reason to approve, inclines us by an involuntary emotion to relieve the distresses of our fellow-creatures, and gives us the purest and most sensible pleasure for our reward.⁹¹

Poverty was not considered to be a flaw in God's providential plan for humankind, but, rather, an essential feature best explained as part of the general problem of evil. The relationship between the social classes was considered to be a reciprocal one and, as we have noted earlier, one in which each station in life had its particular set of duties. The rationale for the eighteenth-century charity hospital and its mandate reflected at any given time the consensus on the role of each of the classes in their duties to each other.

If the religion was an increasingly pragmatic one, it was nevertheless still concerned with benefits in the hereafter, as well as the benefits of a Christian community bound by ties of gratitude and acts of kindness. The spirit of reform was not only due to scientific zeal but also propelled by the call to active religious duty.

Percival's son warned the medical troops of the Manchester Infirmary that to 'be discouraged by opposition; to be alarmed by danger; or overcome by difficulty, is a state of mind unfitted for the Christian warfare'.⁹²

While the proper objects of hospital charity remained the labouring poor, the facilities offered to the general public increased with population pressure and general prosperity. New advances in knowledge, as Percival explained, entailed a broader sphere of duty for the physician. By 1803 the Manchester Infirmary included a lunatic asylum, an out-patient dispensary and a house of recovery or fever hospital, additions created for the most part by Percival and his Edinburgh-trained colleagues.⁹³ Hospitals like the Manchester Infirmary served a variety of social functions and were considered by philanthropists to be the most successful of the charities. They were, as Priestley put it, 'the cheapest of all charities, the most great good being done with the least expense'.⁹⁴ Unlike so many other charities, hospitals appear not to have suffered repeated financial failure or a collapse of public confidence.⁹⁵ Thus it is not surprising that so many physicians wished to have their names associated with them.

From the viewpoint of medical knowledge, hospitals were, by Percival's time, generally viewed as the essential laboratory for clinical medicine and it was inconceivable that there could be a medical school without access to a teaching hospital. Part of the hospital's great success was its capacity for providing a group of patients whose diseases could be observed and systematically treated. Moreover, while earlier, private medicine had allowed physicians only partial control over their patients, hospital practice facilitated a shift in power which gave physicians almost unlimited control. It might even be argued that modern clinical medicine was born of assumed patient compliance. For example, in his *Thoughts on Hospitals*, John Aikin suggested that hospital patients were the best subjects for experiment because, unlike private patients, they were of the classes accustomed to obeying orders. Also, in a hospital, in contrast to a private home, the doctor was free to practise his profession 'away from the notice of prying and conceited bystanders', whose presence had the tendency to make him 'timid and narrow'. In the hospital he was better able 'to exert his genius in any new thought for the benefit of his patient, though unsupported by precedent'. 'In fact', Aikin added,

most of the modern improvements in medicine and surgery have taken their rise from hospital practice; consequently these patients have reaped the first benefits from them; and thereby numbers of

the poor have met with relief in deplorable cases, which without the benefit of these institutions, and the spirit of rational experiment, would in all probability have brought them to a miserable end.⁹⁶

Although there was a great deal of scepticism about 'the spirit of rational experiment' in hospitals, the fear of experimentation in the hospitals of this period included the horror most people felt concerning post-mortem dissections. As Mary Fissell points out, the poor in particular objected to them because the cavalier attitude of the surgeons to the deceased body was at variance with the customary respect due to the dead. For most, dissection was viewed as the ultimate degradation.⁹⁷ The connection between up-to-date medicine and hospital practise was commonly accepted and, by the time Percival began to practice, a hospital position was perceived as the surest route to a successful and lucrative private practice. Nevertheless the hospitals of this period had, as Aikin also noted, their darker side and many patients had good reason to fear the loss of their lives as well as their limbs. Typhus, hospital or jail fever, was often a greater threat to patients' lives than the diseases which had originally gained them admission. Aikin rightly observed that, 'there cannot surely be a greater contradiction in the nature of things than a disease produced by a hospital'.⁹⁸

Typhus thwarted the benevolent intentions of hospitals and it was increasingly impossible to ignore it. Inspired by the works of John Pringle and John Howard on hospital and jail fever, Percival designed a programme for eradicating typhus in the Manchester Infirmary and other similar institutions. It is worth noting that he shared with his Lancashire colleagues an environmentalist theory of disease which, for practical purposes, took into account the remedies proposed by both the miasmatisists and the contagionists. Along with therapeutic measures, Percival, like Pringle, advocated preventative steps which emphasized sanitary architecture and procedural reforms. His contagionist views led him to favour quarantine and hospital buildings designed to reduce or eliminate the dangers of cross-infection and institutional epidemics.⁹⁹ Although it was not known at this time that typhus was carried by body lice, Percival, like Howard, insisted correctly that it was a hardship disease, which affected the debilitated factory workers far more severely than other social groups. Consequently he believed that only the elimination of widespread debility would eradicate the dreaded disease and that this in turn was only possible if the living conditions of the poor were fundamentally improved. These were radical ideas espoused by physicians who, by virtue of their religious and political views, were